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ABSTRACT

This is an evaluation of the first 3 years of Project REALM (Reading English And Learning Mathematics), a project funded by Title VII. This project provides additional support to improve the quality of elementary education for new refugee students. Project REALM has 5 major objectives, including the following: (1) to increase participants' English proficiency; (2) to increase participants' reading ability; (3) to increase participants' mathematic computational skills; (4) to provide professional development for teachers and support staff; and (5) to enhance family participation in school activities and community events. Evaluation involved examining teacher focus group interviews, county professional development proposals and professional development flyers, and student test scores. Overall, Project REALM served 146 limited English proficient students in preschool through grade 4 who spoke 12 languages or dialects, including Bosnians, Cubans, Iraqis, and Somalis. Project REALM was effective in increasing students' English achievement scores, providing extensive professional development to both program staff and related teachers, and encouraging parental involvement in their students' education. (Contains 15 references and 8 tables.) (SM)

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Running head: Language Minority Students

Ensuring School Success for Language Minority Students: Input from the Field on an

Elementary School Program

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Abstract

This is an evaluation of the first three years of the Project REALM (Reading English And Learning Mathematics) grant funded by Title VII of IASA. The primary focus of this grant is to provide additional support to improve the quality of primary education for new refugee students. Project REALM has five major objectives, including 1) to increase participant's English proficiency; 2) to increase participant's reading ability; 3) to improve participant's mathematic computational skills; 4) to provide professional development of teachers and support staff; and 5) to enhance family participation in school activities and community events. Project REALM served 146 Limited English proficient (LEP) students in preschool through P4 who speak 12 languages or dialects including Bosnians, Cubans, Iraqis and Somali. This program has proved to be effective in increasing students English achievement scores, provided extensive professional development to both program staff and related teachers, and has been successful in encouraging parental involvement in their students education.

Keywords: Limited English Proficiency, Elementary School, Academic Achievement, At-Risk Students, Refugee Students

Background

Goals and Objectives of JCPS/ ESL

Jefferson County Public Schools recognizes the need to serve children whose primary language is other than English. Through the English as a Second Language (ESL) Program, ESL teachers, along with bilingual associate instructors and teacher assistants, share with the regular classroom teacher the responsibility of educating LEP students. The primary goal of the ESL staff is to provide the necessary services to ensure that all LEP students become competent in the use of English. In the ESL classroom, students have the opportunity to acquire linguistic skills and cultural understanding necessary to participate in the mainstream activities of the school.

The goals of the English as a Second Language Program are as follows:

- To ensure educational access for immigrant and refugee students
- To ensure appropriate placement of immigrant and refugee students
- To improve school climate for immigrant and refugee students
- To meet special needs of immigrant and refugee students
- To empower immigrant and refugee parents

Overview of Project REALM

Project REALM is a federally funded competitive Title VII grant awarded to JCPS in July 1998. The grant period has a duration of three school years (from 1998-1999 to 2000-2001). Project REALM serves a total of 146 new refugee students in preschool through P4 from four Jefferson County Public elementary schools. The objective of Project REALM is to increase the English, reading, and mathematics proficiency of participating students. Project REALM also aims to increase the capacity of teachers and school support staff from the four target schools in providing appropriate instructional and school support services for LEP

students. A final objective of the program is to increase family participation in school activities and community events.

Project REALM provides an alternative program of instruction to meet the needs of the target students and provides school and community support services to meet the needs of the students' families. The project is designed to 1) establish an English Language Learners (ELL) laboratory to help students learn English using different teaching strategies provided by an ESL teacher and bilingual instructor; 2) provide staff development to increase the capacity of preschool and elementary teachers to implement instructional strategies that enhance English and mathematics abilities; and 3) provide family and community support services during and after school hours to provide support to participants and their families.

Project REALM has five major objectives, including 1) to increase participant's English proficiency; 2) to increase participant's reading ability; 3) to improve participant's mathematic computational skills; 4) to provide professional development of teachers and support staff; and 5) to enhance family participation in school activities and community events.

Data Related to LEP Students

Nation-wide, from the 1985-86 school year through 1994-95, the number of LEP students in public schools grew 109% while total enrollment increased by only 9.5% (Olsen, 1997). Thus, the proportion of language minority students in the schools is growing even more rapidly than the actual numbers. In 1994-95, over 3.1 million school-age children were identified as LEP, approximately 7.3% of the K-12 public school student population. While the number of LEP students has grown exponentially across the U.S., their level of academic achievement has lagged significantly behind that of their language majority peers and these students have high dropout rates (Bennici & Strang, 1995).

Obstacles Encountered by LEP Students

Through review of research in the field of second language acquisition, Anstrom and Kindler (1996) highlight the important role language minority students' play in educational reform. They state that as the nation works towards meeting the goals of education reform as described in Goals 2000, "our ability to achieve these goals is increasingly dependent upon the school's ability to educate language minority students" (p.1). If the goal of educational reform is to educate all students to high standards, then it is important to have comprehensive understanding of non-native English speaking student population, the challenges these students face, the recommendations for improving their educational achievement as measured through large-scale assessments (Anstrom & Kindler, 1996, p.1). A description of obstacles encountered by LEP students, as described in the literature, follows.

While (LEP) students' share a common difficulty with English, they represent a wide variety of language and educational backgrounds. If educators wish to see LEP students succeed academically, they must recognize this diversity and address their educational needs. Canales (as cited in Lui, et al. 1997) states that in addition to language difficulties, many LEP students possess characteristics associated with low educational achievement. For example, LEP students are often exposed to a different curriculum with lower standards than native English speaking students, thus creating a tiered educational system. Research as shown that LEP students have difficulty adjusting to a new school culture and often experience a low social status because of increase in anti-immigrant feelings and racial tensions in school (Minicucci & Olson, 1992). Poverty and related factors such as high unemployment rates, substandard housing and health problems may interfere with a LEP student's ability to learn (CCSSO, 1990 as cited in Lui et al., 1994). And finally, LEP students generally experience a higher drop out rate because of poverty

(Hodgkinson & Outtz, 1992, as cited in Lui et al., 1994). Immigrant and refugee families are more than twice as likely to be poor (U.S. Census, 1990, as cited in Lui et al., 1994). Based on 1990 census data, it is estimated that 37% of language minority students live in poverty, in contrast to 17% of the total student population (USGAO, 1994).

Project REALM addresses the needs of LEP students by creating a learning environment for refugee students. Project REALM is designed as a school, family and community approach to improving the English proficiency and academic achievement of LEP preschool through grade 3 students. An important characteristic of Project REALM is the attention given to familiarizing students and families with their new environment: the school, educational expectations and the community. This evaluation is designed to assess the program's effectiveness.

Evaluation Questions

This evaluation was designed to answer the following *process* evaluation questions:

- 1) What are the socio-demographic characteristics of the students participating in the program?
- 2) What is the level of family participation in school activities and community events?
- 3) What are the professional development sessions offered to teachers and support staff?
- 4) What are the teacher's affective responses to the program?

This evaluation was designed to answer the following *product* evaluation questions:

- 5) What is the impact of the program on student's oral English proficiency?
- 6) What is the impact of the program on student's English reading ability?
- 7) What is the impact of the program on student's mathematics abilities?

Evaluation Framework

Stufflebeam's (1971) CIPP model will provide the framework for this evaluation. CIPP is an acronym for the four types of evaluation included in this model: Context evaluation, Input

evaluation, Process evaluation, and Product evaluation (Worthen, Sanders & Fitzpatrick, 1997).

The Context evaluation helps to define the objectives of the program. The Input evaluation assesses resources available to execute the plan for the program. The Process evaluation assesses how well the program plan is being implemented and provides on-going information to program managers. The Product evaluation is designed to determine if the objectives of the program have been met. The main features of this evaluation include the results from the process evaluation assessing the Project REALM program implementation and the product evaluation assessing the outcomes of Project REALM.

Evaluation Design

This evaluation will utilize a mixed-method evaluation design (Greene, Caracelli, and Graham, 1989). Both quantitative and qualitative methods of gathering data will be used in this evaluation design. This evaluation design can best be characterized as a one-group pretest-posttest design (Campbell and Stanley, 1966). This design involves the administration of a pretest measuring the two dependent variables (English proficiency and mathematics ability), followed by student participation in the program and lastly, the administration of a post-test that measures the dependent variables again. The effects of the program will be determined by comparing the pre-test and post-test scores.

Evaluation Measures

Instruments

Language Assessment Skills. The Language Assessment Skills (LAS) are composed of two batteries: (a) the reading and writing battery and (b) the oral battery. For the purposes of this report, only the most recent forms of the LAS tests for grades 1-6 are described. Collectively, the LAS instrument consists of oral, reading and writing language proficiency assessment available

in English and Spanish. The LAS R/W includes multiple-choice assessment of reading and production of a writing sample. The LAS Oral measures vocabulary, comprehension, and production as well as aural discrimination and pronunciation. The LAS instrument measures English language skills necessary for functioning in the mainstream classroom.

The *Technical Manual* for the LAS-Oral provides statistical evidence to support the validity of the oral portions of the test. Correlation coefficients among the different oral subtests for Form 1C range between .58 and .30; correlation coefficients for Form 1D range between .58 and .25. Based on the *Oral Technical Report* (De Avila & Duncan, 1990) for the most recent forms of the LAS-Oral, Forms C & D (Level I), reliability correlation coefficients ranged from .87 to .88 (Form C) and .87 to .89 (Form D).

A correlation was found between LAS oral and reading scores and Stanford Reading Test scores of the REALM students that had completed both tests (Munoz, 2001). A significant positive relationship was found between LAS Oral score and Stanford Reading Test score with a Pearson Correlation of .325 ($N = 107$, $p < .01$). An even stronger positive relationship was found between LAS reading scores and the Stanford Reading Test scores with a Pearson Correlation coefficient of .667 ($N=87$, $p < .01$).

De Avila and Duncan (1990) offer construct related evidence which links oral language proficiency (as measured through the LAS) with the Comprehensive Test of Basic Skills (CTBS Form U) total reading scores. That is, the authors state that there is a relationship between level of oral language proficiency and academic achievement (i.e., reading achievement). The authors have conducted various studies and analyses, which indicate that as the student's oral proficiency increases (as measured by the LAS), his/her percentile score on the CTBS reading achievement subtest also increases. The authors also state that there exists a linear relationship between the

reading and writing levels on the LAS with CTBS Total Scores. That is, percentile scores on the achievement test increase as the student's LAS reading and writing levels increase. The instruction provided by Project REALM not only prepares them for the mainstream classroom; it may enhance their ability to perform on standardized academic achievement tests.

Stanford Mathematics Diagnostics Test. The Stanford Mathematics Diagnostics Test is given to all REALM participants when they enter the program. This is a standardized norm-referenced test designed to assess elementary students mathematics abilities. The test reliability is high and consistent across levels, ranging from .76 to .95 (Buros, 1978). The Stanford Test, from a psychometric perspective, is an example of thoughtful test development (Impara, Plake, & Murphy, 1998). It is a highly reliable standardized test that has been primarily designed to be a diagnostic test but that can also be used as an achievement instrument to measure student progress. Overall, the district under analysis has matched the state and schools' instructional objectives with the test standards to ensure content validity.

In this study, equal-interval stanines (S or S9) scores were used for the statistical analyses. Stanines are scores that range from 1 (low) to 9 (high) with 5 representing average performance. Stanines indicate relative performance standing in a group and must be interpreted (as any norm-referenced scores like Normal Curve Equivalents) in reference to the particular group from which they were derived. Stanines scores of 1, 2, and 3 indicate below average performance. The Stanford Test is recommended for "providing information regarding the effectiveness of instructional programs, measuring changes that have taken place over an instructional period, and keeping the community and school board informed about student progress" (Impara, Plake, & Murphy, 1998, pp. 930-940).

Teacher Focus Group Interview

An additional source of data was gathered from a semi-structured focus group interview with all of the participating teachers. This process involved a 45-minute discussion that addressed topics related to the objectives of the REALM program. For example, teachers were asked comments on the participants in the program, instructional strategies, administrative support and overall impressions of the program. The evaluation team kept running notes from this focus group discussion. Following the meeting, the evaluation team checked notes for agreement. All data from teacher interviews were coded for concepts and themes (Strauss, 1987; Strauss & Corbin, 1990).

Document Analysis

Document analysis included a review of JCPS professional development proposals, flyers describing professional development and parent outreach flyers. Data collection and analysis continues throughout the study. The data analysis was based on the constant comparison method. “The constant comparison method refers to the continual process of comparing segments within and across categories. Using constant comparison, the researcher clarifies the meaning of each category, creates distinctions between categories, and decides which categories are most important to the study” (Gall, Borg, & Gall, 1996, pp 566-567). All data from the document analysis was coded for concepts and themes that stood out (Strauss, 1987; Strauss & Corbin, 1990).

Evaluation Findings

Process Evaluation

Question 1. What are the characteristics of the students participating in the program?

One hundred and eighty two students participate in the program. The language background makeup of the participants includes a high percent of students whose native language is Spanish (36.7%) and Bosnian (30.3%); the remaining 33% of participating students are distributed among speakers of Arabic, Somalian, and other languages and dialects.

The program is serving students that can be classified as belonging to the low income strata. The socio-economic status indicator for this study was the participation on the national free/reduced lunch program in their elementary schools. The greatest majority of the students (91.6%) qualified for free and reduced lunch and only a little percentage paid for their own lunch (8.4%). In terms of gender, the program served a balanced percent of students (i.e., about 50% males and females). The highest percent of the students participating in the program (41%) were in Kindergarten and in third grade (20% and 21%, respectively); an additional 35% were second and fifth grade elementary students (17.5% and 17.4%, respectively). Approximately 24% of the participating students were in first and fourth grade (11.9% and 12.5%, respectively). Supplementary demographic information is provided in Table 1.

Table 1

Student Profile of the Participants in the REALM Program (N = 167)

<u>Variable</u>	<u>Frequency</u>	<u>Percent</u>
Race		
Black	51	30.5
White	23	13.8
Hispanic	51	30.5
Other	42	25.2
Gender		
Male	87	52.1
Female	80	47.9
Grade		
Kindergarten	33	19.8
1 st	20	11.9
2 nd	29	17.5
3 rd	35	20.9
4 th	21	12.5
5 th	29	17.4
Lunch Status		
Free & Reduced	153	91.6
Paid	14	8.4

Note: The total enrollment was 182 students. The total number of students with a unique identification number was 167, representing 92% of the total enrollment.

Question 2. What was the level of family participation in school activities and community events?

A range of academic and non-academic outreach programs was offered to the parents of students participating in the REALM program. Events included an “International Reading and Lunch” during which REALM participants read with High School students and parents were given an orientation to important school related issues. “Parents and Teachers Talking Together” was designed to bring together ESL teachers and parents to discuss their child’s education. Non-school related outreach sessions included a trip to Iroquois Public Library (i.e., to provide an introduction to the services available at all public libraries), a Job Festival and a “Back to School Shopping Trip to Target”. In order to increase parent involvement in the Project REALM activities, parents received informational flyers in their native language. Transportation was provided to several of the outreach programs.

Question 3. What are the professional development sessions offered to teachers and support staff?

Numerous professional development sessions were offered to both Project REALM staff and JCPS teachers. “When They Don’t All Speak English” was offered to all JCPS employees to prepare them to work with the LEP population. Topics included a background description of refugee students, community resources available to refugee families, and learning a second language. Dr. Jeffery Schwartz, Washington D.C. based consultant, experienced in cultural awareness issues, provided teachers, principals and counselors an in-service. Training topics included cultural adjustment, second language acquisition and effective instructional strategies for LEP students. Additional professional development sessions included “The Internet as a Resource for Elementary School Teachers”, “Introduction to Teacher Made Rubrics,” and

several computer trainings. In addition, as a part of their annual training on transporting students, District's bus drivers were presented information about different cultural backgrounds that they may encounter.

Question 4. What are the teacher's affective responses to the program?

Focus group interviews with participating teachers revealed three main themes. The first theme relates to effective teaching strategies used by the teachers. Teachers stated that they had success teaching math to the Project REALM students. One teacher described a student in her class who didn't speak English, but excelled in math. He was considered the "math hero". Teachers also have found small group work successful. Several teachers stated that they try to engage their students in extracurricular activities. They become "the advocate for student participation in activities outside of ESL" Several success stories were offered about students who have joined a sports team or the band. Singing and rhythm are additional teaching strategies used by teachers.

The second theme that emerged from the focus group discussion relates to levels of parental involvement. Teachers experienced mixed levels of parental involvement of Project REALM students. Some found that attendance was high at parent teacher conferences. Others have found it difficult to establish communication with parents. One teacher has had great success involving parents of Bosnian students by making calls home, inviting them into the classroom and speaking in their native language. Evidence from additional conversations with teachers reveals that parental involvement has improved with time.

The third theme relates to the professional development sessions offered to Project REALM teachers. The teachers appreciated the professional development that was offered to mainstream teachers at their school about topic of cultural sensitivity. They felt it was important

for other teachers to be sensitive to the special needs of ESL students. Overall, teachers agreed that they appreciate the support they receive from the full time bilingual teacher assistants. In addition, the variety of instructional materials provided opportunity for language development.

Product Evaluation

Question 5. What was the impact of Project REALM on participating student's English oral proficiency?

Statistical analysis of the pre and posttest LAS scores indicated students gained proficiency across all three of the areas of English skills (i.e., oral, reading, writing) tested in this evaluation. The greatest gains occurred with scores on the Oral examination. The one hundred and eighty two students who had oral scores from January 2000 and January 2001 increased by average score of 32.17 points after participating in the program for one year. Additional information is included in Table 2. These results indicate the Project REALM program had a positive effect on the participant's English oral proficiency, writing abilities, and reading comprehension.

The following classifications of proficiency levels are possible for the students based on their LAS-Oral score: 1= Non Speaker; 2 =Limited Speaker; 3=Limited Speaker; 4 =Fluent Speaker and 5 =Fluent Speaker. As shown on Table 3, More than half (51%) of the students tested in January 2000 scores fell into the lowest category of the LAS test and only 4% of the students scored high enough to be placed in the fluent speaker category. None of the students scored high enough to be in the fifth category. After one year of participating in the program, only 13 of the students (7%) fell in the lowest category. This illustrates students made great gains in the lower levels of English skills. Seventeen percent of students scored in the fourth category and twenty-two students scores fell in the fifth category, indicating that 39% of the

students were categorized as fluent English speakers. Tables 4, 5, 6 and 7 illustrate the changes of proficiency levels by school.

Question 6. What is the impact of the program on student's English reading and writing ability?

The results of the comparisons of Reading and Writing scores also shows significant gains in learning. Student Reading scores increased by an average of 19 points and student comprehension skills increased by an average of 32.15 points. Additional information is included in Table 2. These results indicate Project REALM had a positive effect on the participant's English writing abilities and reading comprehension.

Table 2

Comparison Between Pretest and Posttest LAS Scores (N = 182)

<u>Subject</u>	<u>N</u>	<u>Mean Pretest</u>	<u>SD</u>	<u>Mean Posttest</u>	<u>SD</u>	<u>Percent Gain</u>	<u>t value</u>
Oral	182	29.24	29.9	61.41	22.19	110%	-19.79*
Reading*	41	49.21	19.79	68.39	18.04	39%	-9.65*
Writing*	39	34.92	28.21	67.07	17.82	92%	-7.961*

Note: The number of Reading and Writing scores included is limited to those which scored 45 or above (limited English speakers) on the oral examination.

* Only 2nd and 3rd graders are tested on reading and writing.

Table 3

Pre-Post Comparison on the Oral Language Assessment Scales (LAS) of Project REALMStudents (N = 182)

<u>Assessment</u>	<u>Level</u>	<u>Standardized Score</u>	<u>n</u>	<u>% of Students</u>
Baseline Year				
	1a	0-20	94	51.6
	1b	21-40	19	10.4
	1c	41-54	14	7.7
	2	55-64	24	13.2
	3	65-74	23	12.6
	4	75-84	8	4.4
	5	85-100	0	0
Comparison Year				
	1a	0-20	13	7.1
	1b	21-40	22	12.1
	1c	41-54	22	12.1
	2	55-64	34	18.7
	3	65-74	38	20.9
	4	75-84	31	17
	5	85-100	22	12.1

Table 4

Pre-Post Comparison on the Oral Language Assessment Scales (LAS) by Achievement Level
for Byck Elementary School (n = 28)

<u>Assessment</u>	<u>Level</u>	<u>Standardized Score</u>	<u>n</u>	<u>% of Students</u>
Baseline Year				
	1a	0-20	21	75%
	1b	21-40	3	11%
	1c	41-54	1	4%
	2	55-64	1	4%
	3	65-74	2	8%
	4	75-84	0	0%
	5	85-100	0	0%
Comparison Year				
	1a	0-20	1	4%
	1b	21-40	3	11%
	1c	41-54	7	24%
	2	55-64	3	11%
	3	65-74	6	22%
	4	75-84	3	11%
	5	85-100	5	17%

Table 5

Pre-Post Comparison on the Oral Language Assessment Scales (LAS) by Achievement Level
for Engelhard Elementary School (n = 49)

<u>Assessment</u>	<u>Level</u>	<u>Standardized Score</u>	<u>n</u>	<u>% of Students</u>
Baseline Year				
	1a	0-20	16	33%
	1b	21-40	6	12%
	1c	41-54	3	6%
	2	55-64	14	30%
	3	65-74	8	17%
	4	75-84	1	2%
	5	85-100	0	0%
Comparison Year				
	1a	0-20	1	2%
	1b	21-40	5	9%
	1c	41-54	3	6%
	2	55-64	8	17%
	3	65-74	12	24%
	4	75-84	14	30%
	5	85-100	6	12%

Table 6

Pre-Post Comparison on the Oral Language Assessment Scales (LAS) by Achievement Level
for Lincoln Elementary School (n = 37)

<u>Assessment</u>	<u>Level</u>	<u>Standardized Score</u>	<u>n</u>	<u>% of Students</u>
Baseline Year				
	1a	0-20	23	62%
	1b	21-40	5	14%
	1c	41-54	2	5%
	2	55-64	3	7%
	3	65-74	3	7%
	4	75-84	2	5%
	5	85-100	0	0%
Comparison Year				
	1a	0-20	6	14%
	1b	21-40	3	7%
	1c	41-54	3	7%
	2	55-64	8	22%
	3	65-74	12	32%
	4	75-84	5	14%
	5	85-100	1	3%

Table 7

Pre-Post Comparison on the Oral Language Assessment Scales (LAS) by Achievement Level
for Wheatley Elementary School (n = 66)

<u>Assessment</u>	<u>Level</u>	<u>Standardized Score</u>	<u>n</u>	<u>% of Students</u>
Baseline Year				
	1a	0-20	34	52%
	1b	21-40	5	7%
	1c	41-54	8	12%
	2	55-64	5	7%
	3	65-74	10	16%
	4	75-84	4	6%
	5	85-100	0	0%
Comparison Year				
	1a	0-20	4	6%
	1b	21-40	11	16%
	1c	41-54	9	14%
	2	55-64	15	22%
	3	65-74	9	14%
	4	75-84	9	14%
	5	85-100	9	14%

Question 7. What is the impact of the program on student's mathematics achievement?

The evaluators selected a random and representative sample of students participating in the program under assessment. An analysis of the pre and posttest Stanford Diagnostic Mathematics Scores indicated students experienced significant gains as a result of this program. As described in Table 8, the average stanine score prior to participating in the REALM program was 2.22. After one year in the program, the average stanine score increased to 3.09.

This program, REALM, is achieving its objective of increasing elementary school student's content knowledge in Mathematics. The students participating in the program had a total percentage gain of 39 when their post-test scores were compared to the pre-test scores (i.e., prior to their involvement with Project REALM).

Table 8

Comparison Between Pretest and Posttest Stanford Mathematics Scores (n = 23)

<u>Subject Area</u>	<u>Mean</u> <u>Pretest</u>	<u>Mean</u> <u>Posttest</u>	<u>t value</u>	<u>Significance value</u>
Stanford Mathematics Test	2.22	3.09	2.07	.029*

Note: * = $p < .05$

Conclusions and Discussion

Project REALM plays an important role in the education of LEP students in Jefferson County. This program has proven to be effective in multiple ways, including (a) increasing students' English language proficiency and (b) improving students' mathematics skills. Some evidence based on document analysis showed an increasing sensitivity for LEP students within mainstream teachers through extensive professional development to both program staff and mainstream teachers. Extensive documentation also showed efforts to encourage parental involvement in their children's' education.

An analysis of the LAS scores of project REALM students reveals a clear increase in student's scores. Of the 146 students in the REALM program, 94 had scores between a 0 and 20 on the Oral portion of the test. After one year in the program only 13 students remained in this lowest category. The most significant changes occurred in bringing students up to the Fluent categories. Prior to receiving REALM instruction only eight students (4.4%) scores were categorized as fluent. After one year nearly one-third of the students (29.1%) were categorized as fluent English speakers. Additionally, the analysis of the pre-posttest performance in the subject area of mathematics showed about 40% gain in content knowledge. In fact, a statistically significant difference was found between the scores before and after participating in the REALM Project.

Two years ago, Project REALM staff discovered that according to ESL parents and students, parent participation in school related events was limited by their lack of awareness of such events and their limited understanding of English (Terzic, 1999). For the 2000-2001 school year numerous efforts were made to increase parent involvement through the following activities: (a) distributing flyers in the language spoken at home; (b) providing transportation for parents to

attend outreach events; (c) providing bilingual associate instructors at Parent- teacher Conference Days; (d) engaging parents in events such as PT3 (Parents & Teachers Talking Together); and, (e) Parent Assistant Group. Project REALM has been successful at increasing parental participation in their child's education.

Project REALM staff appear to be well informed and prepared to address the social and emotional needs of refugee students. As described in the literature, one of the main obstacles to academic success of LEP relate to the social, health and physical needs of the students. All Project REALM staff interviewed agreed that they often must serve as an advocate for their students. This advocacy translates into enrolling students in after school programs, addressing basic sanitation needs of the students, and introducing them to American culture. Project REALM teachers appear to play an important role in the assimilation of the refugee students.

While evidence from teacher interviews suggests that curriculum covered in the Project REALM classrooms is aligned to Kentucky Core Content and Performance Standards, this relationship remains unclear. The student participants in the REALM program will eventually be tested on their knowledge of the Core Content, which has been identified as essential for all students to know. The REALM students will be better prepared for participation in the statewide tests.

Recommendations

Overall, the Project REALM is accomplishing their fundamental objectives. In this circumstance, it is not an easy task for the evaluators to enlighten the key stakeholders with recommendations. However, there is always room for program improvement and development. A couple of recommendations arise from this analysis. Examples of major recommendations include to continue enhancing the linkages between Project REALM classrooms and mainstream

classrooms to avoid the sense of segregation and increase the sense of association that goes beyond a mere co-location in the same school building. A key recommendation is to constantly fortify the alignment of the professional development activities in Project REALM curriculum with Kentucky Core Content for Assessment and Performance Standards. Another relevant issue is to have LEP students' participation in the process of scrimmage testing on reading and mathematics in the elementary school where they are being served; this is especially important for fourth and fifth graders. Finally, it is important to continue providing Project REALM students with additional district support by having an Individual Success Plan (ISP) completed for each child. An ISP provides at-risk students with support to improve their chances for academic success.

Further Research

This research can be extended in several ways. There is much to learn about the long-term impact of the Program REALM on students' achievement in mainstream classes and testing. An additional study is needed to evaluate the long-term impact of the program on the participant's achievement in mainstream classes as measured by GPA and scores on the CATS test. In addition, cost-effectiveness measures should be included in future studies to address the finance-related issues. Further research should also examine the role of professional development in changing teacher performance in the classroom. The assumption is that the teachers and school staff transfer the knowledge and experiences gained during professional development to their own classrooms and schools. An additional study could examine REALM teachers in their schools to assess implementation of strategies and materials learned during the professional development. Finally, further research should include a control group if deemed possible. A control group will add internal validity to the findings of this research.

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